

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) ~~In~~ A method of grinding machine grinding a workpiece by with a grinding wheel having a circumferential surface to supply coolant to one of a grinding point or said workpiece by way of a relative movement between said grinding wheel rotatably supported on a wheel slide and said workpiece supported by a work support device, a the grinding method comprising steps of:

cutting off an air layer flowing on ~~a the~~ circumferential surface ~~of said grinding wheel~~ by blowing a hydraulic jet substantially parallel thereto transversally from one side to the other side of said grinding wheel along said circumferential surface at an upper stream a position upstream of a grinding point with respect to of a rotational direction of rotation of said grinding wheel from said grinding point; and

collecting a mist of coolant blown by said hydraulic jet through a recovering port mounted on a wheel guard covering a part of said grinding wheel.

2. (Currently Amended) ~~A~~ The grinding method according to Claim 1, ~~wherein said grinding method further comprising steps of:~~

absorbing said mist of said coolant from said recovering port by an absorbing ~~equipment; device;~~

separating said mist of ~~said coolant from said recovering port~~ by a separator inserted between said recovering port and said absorbing ~~equipment; device;~~ and

discharging a hydraulic coolant from a discharge port mounted on a lower portion of said wheel guard.

3. (Currently Amended) A The grinding method according to Claim 2, wherein said recovering port is formed on an upper back portion of ~~a back area of~~ said wheel guard.

4. (Currently Amended) A The grinding method according to Claim 2, wherein said recovering port is mounted on said wheel guard at a location substantially diametrically opposite to a location where ~~at said other side of said grinding wheel to face to~~ faces said ~~blown~~ hydraulic jet.

5. (Currently Amended) ~~In a~~ A grinding machine for grinding a workpiece by with a grinding wheel ~~to supply coolant to one of a grinding point or said workpiece~~ having a circumferential surface by way of a relative movement between said grinding wheel rotatably supported on a wheel slide and said workpiece supported by a work support device, ~~said the~~ grinding machine comprising:

a nozzle mounted on a wheel guard covering a part of said grinding wheel and configured to blow a ~~blowing~~ hydraulic jet substantially parallel to the ~~transversally from one side to the other side of said grinding wheel along a circumferential surface at a~~ an upper stream position upstream of a grinding point with respect to ~~of a rotational direction of rotation of said grinding wheel from said grinding point to cut off an~~ an air layer flowing on said circumferential surface ~~of said grinding wheel~~; and

a recovering port mounted on said wheel guard configured to collect a ~~and collecting~~ mist of coolant blown by said hydraulic jet.

6. (Currently Amended) A The grinding machine according to Claim 5, ~~wherein said grinding machine~~ further comprising:

an absorbing ~~equipment connecting~~ device connected to said recovering port ~~mounted on said wheel guard~~;

a separator connected between said recovering port and said absorbing ~~equipment and separating~~ device configured to separate said mist of said coolant from said hydraulic jet; and

a discharge port mounted on a lower portion of said wheel guard ~~and discharging~~ configured to discharge a hydraulic coolant from said wheel guard; ~~and, wherein~~ said hydraulic jet is an air jet.

7. (Currently Amended) A The grinding machine according to Claim 6, wherein said recovering port is formed on an upper back portion of ~~a back area of~~ said wheel guard.

8. (Currently Amended) A The grinding machine according to Claim 6, wherein said recovering port is mounted on said wheel guard at a location substantially diametrically opposite to a location where said ~~other side of said~~ grinding wheel ~~to face to~~ faces said nozzle.

9. (Currently Amended) A The grinding machine according to Claim 5 ~~one of Claim 6 to Claim 8~~, wherein ~~said grinding machine comprises~~ further comprising:

a baffle plate mounted on said wheel guard ~~and facing to~~ said grinding wheel and separated therefrom by with a small clearance at ~~an upper stream~~ a position upstream of position of said hydraulic jet ~~of said rotational direction of said grinding wheel from a point of said hydraulic jet~~.

10. (Currently Amended) A The grinding machine according to Claim 9 ~~one of Claim 6 to Claim 9~~, wherein said wheel guard comprises a ~~is an almost-sealed construction, and to~~

~~project~~ only a front portion of said grinding wheel around said grinding point projects from said wheel guard through a slit formed in a front wall ~~thereof, of said wheel guard.~~

11. (Currently Amended) ~~A~~ The grinding machine according to Claim 10, wherein[:]
said wheel guard comprises a guard body configured to shield a ~~shielding said one side~~
surface of said grinding wheel ~~at a side of~~ facing said wheel slide ~~and said circumferential~~
~~surface of said grinding wheel,~~ and a cover shielding an ~~opened~~ opening portion of said
grinding wheel on the opposite side surface ~~at a side of said other side of said grinding~~
~~wheel,~~ and said slit is formed by a cooperation of a front wall of said guard body and a front
wall of said cover when said cover is pivoted to close said ~~opening~~ opened portion.

12. (Currently Amended) ~~A~~ The grinding machine according to ~~Claim 7 or Claim~~
~~8~~ Claim 5, ~~wherein said grinding machine further comprises~~ comprising a unitary construction
coolant supplying device, ~~and said coolant supplying device is a unitary construction of:~~
comprising:

a coolant supplying portion ~~consists of~~ comprising a coolant nozzle configured to
discharge ~~discharging~~ said coolant to at least one of said grinding point P and an outer
peripheral surface of said workpiece, and a coolant introducing path ~~introducing~~ configured
to introduce said coolant to said coolant nozzle;

a hydraulic jet supplying portion ~~consisting of a hydraulic jet~~ comprising the nozzle
~~blowing hydraulic jet transversally from said one side to the other side of said grinding wheel~~
~~along said circumferential surface of said grinding wheel at an upper stream position of said~~
~~wheel rotational direction from said grinding point, and an introducing a path~~ configured to
introduce ~~introducing~~ said hydraulic jet to said ~~hydraulic jet~~ nozzle; and

a hydraulic jet recovering portion ~~consisting of~~ comprising a recovering port member ~~opened to face to~~ facing said hydraulic jet nozzle ~~at a side of said other side surface of said grinding wheel 51,~~ and a hydraulic jet discharging path ~~leading~~ configured to lead said hydraulic jet ~~with~~ and said mist of ~~said~~ coolant outside.

13. (Currently Amended) A grinding machine according to Claim 5 ~~one of Claim 6 to Claim 12,~~ wherein ~~said grinding machine~~ further ~~comprises~~ comprising an ecology grinding equipment, ~~said ecology grinding equipment consists of:~~ comprising:

said coolant nozzle directly facing ~~directly to~~ said workpiece, the coolant nozzle being configured to supply ~~for supplying~~ a small amount of said coolant to cool said workpiece;

a compressed air nozzle ~~opening~~ opened to said circumferential surface of said grinding wheel ~~at an upper stream of said rotational direction of said grinding wheel from said grinding point;~~ the upstream position; and

a another nozzle mounted on said compressed air nozzle and connected ~~connecting~~ to a lubrication tank, the another nozzle being configured to drop deliver lubrication oil to said compressed air nozzle in order to lubricate said grinding wheel at said grinding point.

14. (New) A grinding machine, comprising:
a grinding wheel mounted on a wheel slide;
a workpiece holder configured to support a workpiece to be grinded by the grinding wheel; and
means for cooling the grinding wheel and the workpiece with a coolant.

15. (New) The grinding machine according to claim 14, wherein the means for cooling comprises means for recirculating the coolant.

16. (New) The grinding machine according to Claim 14, wherein the means for cooling comprises means for cutting off an air layer at a circumferential grinding surface of said grinding wheel.